

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-26. (Canceled)

27. (New) A method for detecting the presence of lung cancer in a biological sample comprising:

(a) measuring in the biological sample a combined mRNA expression profile of a combination of lung tumor antigens selected from any one of the following Groups:

Group 1: L762, L552, L550 and L984;

Group 2: L763, L552, L550 and L984;

Group 3: L763, L552, L587 and L984;

Group 4: L763, L550, L587 and L984;

Group 5: L763, L550 and L587; and

Group 6: L762, L984, L550 and L587;

wherein a level of mRNA expression of the combined mRNA expression profile above a pre-determined cutoff value indicates the presence of lung cancer in the biological sample and wherein the method has a specificity for detecting the presence of lung cancer of at least 86%.

28. (New) The method of claim 27, wherein step (a) comprises measuring the mRNA expression profile using a nucleic acid hybridization technique.

29. (New) The method of claim 27, wherein step (a) comprises measuring the mRNA expression profile using a nucleic acid amplification method.

30. (New) The method of claim 29, wherein step (a) comprises measuring the mRNA expression profile using a nucleic acid amplification method selected from the group consisting of transcription-based amplification, polymerase chain reaction amplification (PCR), ligase chain reaction amplification (LCR), strand displacement amplification (SDA), and nucleic acid sequence based amplification (NASBA).

31. (New) The method of claim 27, wherein the L762P lung tumor antigen comprises a nucleic acid sequence set forth in SEQ ID NO: 1 or a nucleic acid sequence encoding an amino acid sequence set forth in SEQ ID NO: 2.

32. (New) The method of claim 27, wherein the L550S lung tumor antigen comprises a nucleic acid sequence set forth in SEQ ID NO: 5 or a nucleic acid sequence encoding an amino acid sequence set forth in SEQ ID NO: 6.

33. (New) The method of claim 27, wherein the L587S lung tumor antigen comprises a nucleic acid sequence set forth in SEQ ID NO: 26 or a nucleic acid sequence encoding an amino acid sequence set forth in SEQ ID NO: 27.

34. (New) The method of claim 27, wherein the L984P lung tumor antigen comprises a nucleic acid sequence set forth in SEQ ID NO: 3 or a nucleic acid sequence encoding an amino acid sequence set forth in SEQ ID NO: 4.

35. (New) The method of claim 27, wherein the lung cancer is a small cell lung cancer or a non-small cell lung cancer.

36. (New) The method of claim 27, wherein the biological sample is a sample suspected of containing the lung tumor antigens or cancer cells expressing the lung tumor antigens.

37. (New) The method of claim 27, wherein the biological sample is selected from the group consisting of a biopsy sample, lavage sample, sputum sample, serum sample, peripheral blood sample, lymph node sample, bone marrow sample, urine sample, and pleural effusion sample.